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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 822,523	03 30 2001	Donald R. Parris	C0002	1075

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CORNING CABLE SYSTEMS LLC

P O BOX 489

HICKORY, NC 28603

EXAMINER

KANG, JULIANA K

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,523

Applicant(s)

PARRIS ET AL.

Examiner

Juliana K. Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,4
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. In the present instance, claim 1 recites the broad recitation said at least one formed area in lines 6-7, and the claim also recites a formed area in line 4

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which is the narrower statement of the range/limitation. Because the limitation "at least one formed area" can mean one or more, it is not clear to the Examiner whether applicant means one or a plurality of formed area. The same rejection applies to claim 17. Claims 2-16 and 18-23, which are dependent on claims 1 and 17, also inherently contain the same deficiencies.

Claims 4, 5, 20, 21 34 and 35 recite the limitations "preferential" and "non-preferential." These claim languages make the claims vague and unclear because they do not clearly recite what the basis is for something to be preferential or non-preferential. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1- 5, 7-9, 11, 13-23, 26, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Heinz et al (WO99/53353, submitted by applicant) as best understood by the Examiner with the rejections stated above.**

Regarding claim 1, Heinz et al disclose a fiber optic cable comprising a strength member (IS, AS) in a tubular shell form having at least one fiber access opening (ISP, ASP) leading to a formed area, at least one optical fiber component (LW1..LWn) and a cable jacket (AM) generally surrounding the strength member (AS, IS).

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Regarding claims 2, 3 and 11, Heinz et al disclose that the strength member is made from a strip-shaped metal foil having a substantially uniform thickness (see page 19 lines 9-20).

Regarding claims 4 and 5, Heinz et al disclose that the strength member's thickness is expediently chosen between 0.1 and 1mm. Heinz et al also teach having different thickness or material for the cable elements. Choosing expedient thickness of cable elements would inherently provide the cable with a non-preferential or preferential bend characteristic depending on the thickness of the cable element chosen.

Regarding claims 7 and 8, Heinz et al show U-shaped with a generally flat bottom portion in Fig. 5.

Regarding claim 9, Heinz et al show a cross-sectional area of the cable being generally non-circular (see Figs. 6 and 7).

Regarding claim 13, Heinz et al disclose that the jacket may be a single-layer or multi-layer structure. Thus, when Heinz et al's jacket is a multi-layer structure, it includes an interfacial layer between the strength member and the outer jacket layer.

Regarding claims 14-16, Heinz et al disclose the fibers placed in a decoupling zone (chamber, KK2 [formed area]) filled with a water-blocking component (FM)(see page 25 lines 10-15).

Regarding claims 17-23, 28, 30, and 31, as described above, Heinz et al disclose the claimed optical fiber cable.

Regarding claim 26, Heinz et al disclose an interstice (gap on the bottom) filled with the jacket material (see Fig. 2).

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6. **Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimmich et al (U.S. Patent 4,852,966, submitted by applicant).**

Regarding claim 1, Kimmich et al disclose an optical fiber cable comprising a corrugated sheet (strength member (4)) having fiber access openings (open-side of grooves) for optical fibers (5) with a formed area (grooves) and a cable jacket generally surrounding the strength member (2, 3).

Regarding claim 17, Kimmich et al disclose a water-blocking component (6) (see column 2 lines 3-8), a decoupling zone (grooved area where the fiber is located) disposed in the formed area and an interfacial layer (6) disposed between an outer surface of the strength member and the cable jacket.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 10, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz et al as applied to claims 1 and 17 above, and further in view of Fitz et al (U.S. Patent 6,137,936).**

As described above, Heinz et al disclose the claimed optical cable except indicia. Fitz et al teach an optical fiber cable with a jacket including indicia to make the position

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of the strength member readily apparent from the external of the cable. Fitz et al further teach that the indicia, preferably, is a ridge or groove on or in a portion of the jacket surface. Heinz et al's cable also includes strength member (ZE1, ZE2, in Fig. 2), thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to use indicia in Heinz et al as taught by Fitz et al to mark the cable elements that are embedded in the cable for easier recognition when it is desired to expose the optical cable elements.

9. Claims 12, 27 and 32-44 rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz et al.

Regarding claims 32-41, 43 and 44, as described above, Heinz et al disclose the claimed optical fiber cable except the strain values of the cable for different tensile forces. Heinz et al teach the strength member material and the thickness that are same or similar to the applicant. For example, Heinz et al's the strength member is made of metallic material and the thickness of the strength member is in the range of 0.1mm and 2mm while applicant's strength member is made of metallic material and the thickness is in the range of 0.25mm and 2mm. Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Heinz et al's strength member thickness or material to obtain any desired strain values including the applicant's claimed strain values, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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Regarding claims 12, 27 and 42, as described above, Heinz et al teach the claimed invention including a metallic sheet and a cable-filling compound. However, Heinz et al do not explicitly teach a central electrical conductor surrounded by a dielectric material. Heinz et al teach that the cable is used for electrical and/or optical telecommunication cable (see page 20 lines 6-9). Thus, even though Heinz et al do not positively teach an electrical conductor placed in the formed area, it would have been obvious to one with ordinary skill in the art to use an electrical conductor, and to place the electrical conductor in the formed area to provide extra protection for the electrical conductor by placing them inside the strength member. Use of a dielectric material would have been also obvious to provide the insulation for the electrical conductor from the metal strength member.

10. Claims 6 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmich et al (U.S. Patent 4,852,966, submitted by applicant).

Regarding claims 6 and 29, as described above Kimmich et al disclose the claimed invention except the V-shaped formed area. Kimmich et al states that the strength member is a corrugated sheet. The term "corrugate" means to shape into folds or parallel and alternating ridges and grooves. Even though Kimmich et al only show generally U-shaped formed area, it would have been obvious to one with ordinary skill in the art to recognize the V-shaped formed area (ridge) as another shape of formed area. It is also noted that applicant does not provide the criticality of a V-shaped formed area.

Conclusion

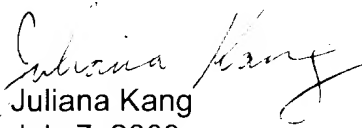
11. The prior art documents submitted by applicant have been considered and made of record (note the attached copies of form PTO-1449).

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakagome et al (U.S. Patent 4,257,675) teach an optical fiber cable comprising a pressure-resisting sheath made of a sheet-like tape and formed into V-shaped compartments (see Figs. 3 and 4). Keller (U.S. Patent 6,169,834 B1) teaches a composite cable for conducting electrical and optical signals.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (703) 305-6259. The examiner can normally be reached on Mondays and Thursdays 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3072.


Juliana Kang
July 7, 2003